



Intel® 830M4 Development Platform

Board Support Package for
Microsoft® Windows® CE .NET 4.2



Product Overview

The Board Support Package (BSP) is designed to accelerate IP-Digital Set Top Box designs based on the Intel® 830M4 Development Platform and Microsoft® Windows® CE .NET 4.2. Intended as a validated platform in the Microsoft Platform Builder environment, the BSP includes the library of drivers required to build an image for applications including IP-Digital Set Top Box (IP-DSTB) and other CE client devices.

The driver set includes support for:

- The Intel® 830M4 chipset with high-performance integrated graphics
- Flexible peripheral connectivity of USB 1.1
- Full 10/100 Ethernet connectivity
- Compact Flash and ATAPI drives
- Dolby Digital® and Digital Theater Sound® (DTS) 5.1 channel audio
- Power management

Product Highlights

Audio Driver¹

- Dolby Digital and DTS 5.1 channel audio
- Concurrent L/R stereo and S/PDIF output in PCM or Dolby Digital/DTS 5.1 formats
- Validated on Realtek® RLC650 and Sigmatel® STAC9766/67
- Compatible with, but not validated on, Realtek RLC655, Sigmatel STAC9750/56/57/58

ATAPI Driver

- Compact Flash and ATA drives supported (all PIO and Ultra-DMA modes)
- Supports CD/DVD read

NDIS Driver

- 10/100 full duplex transmission
- Validated on Intel® 82562ET Fast Ethernet controller
- Compatible with, but not validated on, Intel® 82551, 82551ER, 82559ER and 82562 family

Intel® Digital Set Top Box Driver

- GDI and Direct Draw APIs
- Dynamic memory support
- Accelerated per-pixel alpha blending in the following formats:
 - 32 bit ARGB 8888
 - 32 bit ARGB 4444
 - 16 bit ARGB 1555
 - 16 bit RGB 565
 - YUV packed & planar
- Hardware 2D graphics acceleration
- Hardware cursor
- Video overlay
- 16 and 32-bit color depth
- Display resolutions supported (desktop):
 - 640 x 480
 - 720 x 480
 - 720 x 576
- Support for the following TV encoders:
 - Conexant® CX25873
 - Focus Enhancements® FS45x family
- TV output resolutions/rates supported²:
 - 720 x 480 29.97 fps
 - 720 x 576 25 fps
- TV standards supported:
 - NTSC M, J
 - PAL-B, D, G, H, I
 - SECAM³-L, L1, B, D, G, H, K, K1
- TV output controls available:
 - Brightness, contrast, flicker/text filter, saturation, sharpness, hue, overscan ratio, macrovision

Power Management

- S0 and S3 power states supported

General

- USB 1.1

BSP Packaging

The CE .NET 4.2 BSP includes five major components, packaged as follows:

- 830DSTB_CEBSPv4.2.x.x.msi
- BSP including OAL, ETHDBG, eboot.bin for Intel NIC, with build configuration to make use of the separately-packaged drivers
- E100CE_v4.2.x.x.msi
- NDIS driver for Intel NIC
- ICHUAM_v4.2.x.x.msi
- UAM audio driver with support for ICH4
- ICHIDE_v4.2.x.x.msi
- ATAPI/IDE driver with support for ICH4
- DDI_i830_v4.2.x.x.msi
- Display driver with support for 830M4 GMCH

The CE .NET 4.2 BSP and drivers are validated and distributed together. Updates for individual drivers are validated in combination with the most recent gold or gold-candidate BSP and drivers, and may be updated separately in the Platform Builder catalog.

Intel Advantage

Intel Consumer Electronics reference designs include Intel® processors, chipsets and other building blocks in configurations that can help manufacturers meet a variety of customer requirements. Intel and leading vendors provide the complementary building blocks you need to reduce cost and accelerate time-to-market.

Ordering Information

For information on how to obtain the Intel® 830M4 Development Platform CE .NET 4.2 Board Support Package contact your Intel representative.

¹ Windows® Media 9 Series audio, MP3, MPEG1 and AVI content types are supported by CE .NET 4.2 codecs. The audio driver accepts these formats in decoded form (PCM format).

² Not all output resolutions/rates available at all input/desktop resolutions/rates.

³ CX25873 only

Intel Access

Developer's Site	developer.intel.com
Embedded Intel® Architecture Home Page	www.intel.com/design/intarch
Intel® Technical Documentation Center	www.intel.com/go/techdoc (800) 548-4725 7 a.m. to 7 p.m. CST (U.S. and Canada) International locations please contact your local sales office.
General Information Hotline	(800) 628-8686 or (916) 356-3104 5 a.m. to 5 p.m. PST For more information, visit the Intel Web site at: developer.intel.com

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